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(54) Title: **HYDROTHERMAL PROCESS FOR THE PREPARATION OF QUASI-CRYSTALLINE BOEHMITE**

(57) Abstract: Process for the preparation of quasi-crystalline boehmite comprising the steps of: (a) preparing an aqueous precursor mixture comprising a water-insoluble aluminium source; (b) decreasing the pH of the precursor mixture of step (a) by at least 2 units; (c) increasing the pH of the mixture of step (b) by at least 2 units, and (d) aging the mixture of step (c) under hydrothermal conditions to form a quasi-crystalline boehmite. This process provides for the hydrothermal preparation of quasi-crystalline boehmites with high peptizability. The invention therefore further relates to quasi-crystalline boehmites with a high peptizability, measured as the Z-average submicron particle size. This Z-average submicron particle size preferably is less than 500 nm, more preferably less than 300 nm, even more preferably less than 200 nm, and most preferably less than 100 nm.

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